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EXAMINER

HUYNH, KIM NGOC

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 01/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,581

Applicant(s)

WINSLOW, CHARLES H.

Examiner

Kim Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. Applicant is reminded to update the Cross Reference to Related Application with appropriate US Patent and/or Application Numbers.
2. The use of the trademarks such as Windows NT, CE TS, Server, Citrix Winframe or Metaframe have been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-12 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 1 recites "a logic unit with a central processor ... and a keyboard attached to a port on the logic unit where the keyboard transmits scan codes to the logic unit". It is unclear if the logic unit applicant refers herein is a program or a physical unit within the CPU.

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b. Claim 4 and 9 recite the limitation "logic unit operating system is a Windows operating system" (emphasis added), claim 1 recites a logic unit and an operating system as two separate item. It is unclear what applicant means then by "logic unit operating system".

c. Claims 4 and 9 also contain the trademark/trade name "Windows". Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe an operating system and, accordingly, the identification/description is indefinite.

d. Claim 14 recites "the addition of a keyboard driver and filter program is replaced by steps of adding a keyboard driver program and a filter program wherein ...". This limitation renders the claim indefinite since it negates the limitation recited in the independent claim 13.

Correction/clarification required.

5. The following rejections are made based on the examiner's best interpretation of the claims in light of the 35 USC 112 rejection.

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Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 7 and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Rose (US 5,623,261).

Rose discloses a system hence a method having a logic unit with a central processor 12 (all processor include logic for receiving input signals), an operating system program and at least one application program; a keyboard 16 attached to a port (A or B) which is serves to transmit the scan codes to the logic unit (col. 4, ll. 8-39), at least one of which scan codes is not recognized by the operating system for processing and transmittal to the application program (function key or simultaneously pressed key, col. 4, ll. 8-16); a keyboard driver program that intercepts incoming scan codes from the keyboard and transmits to a filter program (block 40, driver intercepts the incoming scan code and sending them to the translation table instead of the CPU to translate from scan codes to virtual key codes, table includes the character code and function code mapping) which converts any unrecognized scan codes (function key or simultaneously

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pressed key, col. 4, ll. 8-16); to unique combinations of scan codes recognized by the operating system (col. 4, ll. 29-44), adds internal key codes (see Fig. 5-6 and their descriptions, codes: alt, shift, layer, accent, modifier in addition to the base) associated with each recognized and unrecognized scan code, and transmits scan codes and internal key codes to the operating system; and a keyboard mapping program (block 42, translate virtual key codes into character or function input) which is associates each internal key codes with an originating keystrokes for use by the application program (word processing application, col. 6, ll. 1-13).

Claim 7, Rose discloses the keyboard driver program and the filter program are combined into a single program (block 40) that intercepts incoming scan codes from the keyboard, converts any unrecognized scan codes to unique combinations of scan codes recognized by the operating system, adds internal key codes (alt, shift, layer, accent, see Fig5, modifier in addition to the base) associated with each recognized and unrecognized scan code, and transmits scan codes and internal key codes to the operating system.

8. Claims 1, 7 and 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Paolini (US 6,429,703).

Claims 1 and 13-14, Paolini discloses computer system hence a method having a keyboard 140, a central processor 102 with logic unit (interrupt controller) for accepting input signals from a port connecting to the logic unit (col. 4, ll. 60-62), operating system and application program; at least one of the scan codes is not recognized by the operating system for processing and transmittal to the application

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program (including several conversion tables for different keyboard layout, col. 5, ll. 6-17), and a keyboard driver program that intercepts incoming scan codes to convert it into unique combination of scan code recognized by the OS, adds internal key codes associated with recognized and unrecognized scan codes, and transmits them to the OS, a keyboard mapping program associates each internal key codes with an original keystrokes for use by the application program. The system of Paolini uses a plurality of keyboards (including non-standard keyboard) for converting non-standard scan codes modified internal key codes (virtual key number, vKeyNumber) before they are processing by the operating system, and a keyboard map file associated with the application software converts the modified internal key codes received from the OS to characters, functions or commands to be identified with original keystrokes. The system having a logic unit with a central processor 102, an operating system program and at least one application program (intrinsic in a processor system, see col. 1, ll. 35-52); a keyboard 140 attached to a port of the central processor 102 to transmit the scan codes to the logic unit, at least one of which scan codes is not recognized by the operating system for processing and transmittal to the application program (keys that are not defined in the abstract key table, col. 3, ll. 30-45); a keyboard driver program (device driver 420, see Fig. 4) that intercepts incoming scan codes from the keyboard and transmits to a filter program (abstract virtual keyboard AVK, mapping device input/scan codes to AVK vKeyNumber, step 330) which converts any unrecognized scan codes to unique combinations of scan codes recognized by the operating system (the AVK includes all known keyboard keys and all of the button placements/functions from every

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keyboard existence), adds internal key codes (AVK vKeyNumber) associated with each recognized and unrecognized scan code (correspond to specific characters and functions of the key and not the position/scan code, col. 3, ll. 30-45 and col. 5, ll. 44-60), and transmits scan codes and internal key codes to the operating system; and a keyboard mapping program (translate vkeycode to character function code, step 350, see also abstract) which is associates each internal key codes with an originating keystrokes for use by the application program.

Claim 7, Paolini discloses the keyboard driver program and the filter program are combined into a single program (the AVK mapping occurs at the device driver 420, see Fig. 4) that intercepts incoming scan codes from the keyboard, converts any unrecognized scan codes to unique combinations of scan codes recognized by the operating system, adds internal key codes (alt, shift, layer, accent, see Fig5, modifier in addition to the base) associated with each recognized and unrecognized scan code, and transmits scan codes and internal key codes to the operating system.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 2-3 and 8-10 are rejected under 35 U.S.C. 103(a) as being obvious over Rose or Paolini in view of Satoh et al. (US 6,456,277

Claim 2 and 8, Rose and Paolini do not explicitly disclose a network connection to a server and wherein the application program and the keyboard mapping program are on the server. Satoh discloses in the background that scan codes produced by keyboard at the terminal/remote stations are conventionally converted at the server (managing station, col. 1, ll. 35-67) in order to resolve the problem of different keyboard layouts from different remote locations/countries. It would have been obvious to one having ordinary skill in the art to utilize the system of Rose and Paolini as a host on a network in order to allow the use of different types of keyboard for the system since both Rose and Paolini disclose enabling the use of any type of keyboard (including keyboard for different countries) for any type of operating systems.

Claims 3 and 9, Paolini discloses the keyboard is a 122-key keyboard (claim 6, col. 10, ll. 30-33). Rose discloses the keyboard can be any types of keyboards.

Claim 4 and 10, Paolini and Rose disclose the internal key codes are virtual key codes but do not disclose the operating system is a Windows operating system. However, the use of Window operating system is the most popular operating system used. It would have been obvious to one having ordinary skill in the art for Paolini and Rose to utilize Window OS in order to take advantage of its popularity for various users.

11. Claim 4-5 and 11-12 are rejected under 35 U.S.C. 103(a) as being obvious over Rose or Paolini in view of Satoh et al. (US 6,456,277) and further in view of applicant's admitted prior art (background).

As for the application program is a terminal emulation program, please note as admitted by applicant, emulation program are use in client-server architecture to provide

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flexibility PC on user desktops. It would have been obvious to one having ordinary skill in the art to utilize terminal emulation program in the system of Paolin or Rose in view of Satoh to allow the flexibility of the system since both Paolini and Rose are concern with utilize multiple data systems with diverse operating systems.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (571) 272-4147.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kim Huynh
Primary Examiner
Art Unit 2182

KH
12/21/04